



November 14, 2019

## Memorandum to the National Architectural Accrediting Board

From: Cornelius "Kin" DuBois, FAIA  
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Subject: Visit One for NAAB International Certification  
Hashemite University, Zarqa, Jordan  
Bachelor of Architecture (172 credit hours)

On May 30, 2019, the Hashemite University submitted an application in support of its intention to seek NAAB International Certification for its Bachelor of Architecture degree. The application was filed under the terms of the 2019 *Procedures for NAAB International Certification*.

Kin DuBois and Michael Buono conducted visit one on November 6-7, 2019. The purpose of visit one is threefold:

- To review the Conditions and Procedures for NAAB International Certification with program administrators, faculty, staff, and students.
- To confirm the program's commitment to achieving the IC designation.
- To review the physical, financial, human, and information resources committed to the program.

Upon completion of the visit, the review team is required to submit a memorandum to the NAAB Board of Directors addressing the following four areas:

1. A review of the resources committed to the program.
2. Commitment of the institution to the plan for achieving NAAB International Certification.
3. Assessment of the program's readiness for visit two (candidacy).
4. Recommendation to the NAAB board on whether and when to schedule visit two, as well as whether a program representative should complete any specific training or other activity.

### Note of Explanation:

1. **A note on the formatting of this report:** Where we have quoted directly from the Institutional Overview provided by Hashemite University, text has been in italics and indented. There are some other passages adapted and amended text into the team narrative, in which case this text is not italicized or otherwise identified.
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## 1. Overview of Program

The Hashemite University, one of the Jordanian state-run universities (named for the Jordanian royal family, the Hashemites) was established under royal decree on June 19, 1991. Teaching at the university started on September 16, 1995, with three faculties and 600 students in the first year. The university is located on a campus of 8519 acres, 15% of which is used for buildings, with the rest assigned to planting, agriculture, circulation, and other functions. The campus is located east of the city of Zarqa, northeast of the capital of Amman.

Over the past 24 years, HU has expanded to a total of 19 faculties, comprising 53 departments, 696 faculty members, more than 21,000 students, and more than 30 master's and PhD programs. It also offers an international admission program that allows non-Jordanian students to enroll at the university.

The institutional vision, mission and values of the Hashemite University are as follows:

### ***Vision***

*HU is oriented toward achieving an academic pioneering position in university teaching scientific research, at both the national and regional levels, to serve society through its educational functions and to participate in the advancement of knowledge.*

### ***Mission***

*The Hashemite University as a youthful and prominent higher education institution is committed to actively participate in achieving the goals of the comprehensive national development through preparing loyal men and women who are not only technically competent in their professional fields, but also life-long learners who have a breadth vision, loyalty to their nation, and a sense of civil and moral responsibility and a devotion to the fundamental values of human life.*

### ***Values***

*We value:*

- *Human rights of equity, justice, dignity, diversity and respect for ourselves, the communities, and the individuals that we serve.*
- *A culture of appreciation, service, transparency, social responsibility and integrity, both institutional and individual.*
- *An environment of professional excellence and quality, innovation, creativity, research and intellectual curiosity with ethical bounds.*
- *Institutional and personal roles that simultaneously include leadership, participation and partnership.*
- *A spirit of mutual enabling and improvement in all professional activities; and*
- *An entrepreneurial atmosphere that prizes ethical standards, as well as solution and application.*



## The Engineering College and the Architecture Department

The faculty of engineering was established in August 1998, with an enrollment of 300 students and a total teaching staff of 20. The first cohort of students graduated in 2003. The faculty, which now includes Architectural Engineering, comprises 112 faculty members, 20 teaching assistants, 34 staff and technicians, 40 laboratory administrators, with student enrollment increased to 4800.

The architecture department was established in 2005, enrolling 27 students and a total teaching staff of 3 in 2006. The department has grown to 20 faculty members, 6 scholarship students pursuing doctorates, 3 lab supervisors, 2 technicians, and a library supervisor, with student enrollment grown to 300. When the Faculty of Engineering was reorganized in 2009, the architecture degree program was revised in anticipation of the process to achieve NAAB Substantial Equivalency. It was again revised (in 2009 and 2011) to satisfy the requirements of the Higher Education Accreditation Commission of Jordan.

The Department of Architectural Engineering currently offers a single full-time study track leading to the degree of Bachelor of Science in Architectural Engineering. This professional degree, which consists of a total of 172 credit hours, is also titled as Bachelor of Architecture and is delivered through 10 full semesters over 5 academic years.

As the Institutional Overview (IO) states:

*The department aims to provide a specialized program to prepare architects who are familiar with the various schools of architectural design, theories of architecture history, technology applications in design and construction methods, work and how to prepare the engineering plans and project management as the focus is on their definition of the architectural reality in Jordan through the introduction of projects related to the local community and regional as well as hosting local architects to arbitrate their projects in different years of study.*

The Program Educational Objectives are summarized in the Institutional Overview as follows:

- 1) *Practice Architecture profession with confidence, global competitiveness and superior work ethics and character.*
- 2) *Apply professional knowledge, expertise, and technical skills to identify, examine, present, communicate, perform, and produce efficient, creative, and sustainable architectural design concepts and realistic solutions.*
- 3) *Demonstrate high proficiency in critical thinking, communication, and solving complex design problems.*
- 4) *Pursue life-long learning skills to meet the evolving built environment and architectural challenges facing the society.*
- 5) *Work effectively in multi-disciplinary teams within the building industry by providing knowledge in built environment, related disciplines relevant to ethical responsibilities and professional obligations in architecture.*
- 6) *Be able to pursue advanced study and research at the graduate level.*

The architecture program has developed a comprehensive Learning Culture framework, including a Studio Culture Policy that addresses, among other concerns, student/student and



student/faculty relationships. As the Institutional Overview states, “*The Department Chair, faculty members, and students’ representatives review the Studio Culture Policy annually and update the document.*”

Curriculum is developed by the department level Curriculum Development Committee, as part of a university structure that flows down from the university level Curriculum Development Committee through the college dean, department chair, and the department council. The department committee comprises tenured faculty but is also open to all full-time faculty. With respect to the evaluation of design studios, faculty, students, and visiting jurors contribute to the curricular assessment process. As the IO reports “*the jury system is used to measure students’ ability to produce intended outcomes and performance skills.*”

### **Additional Observations**

Hashemite University has submitted an extremely thorough and extensive Institutional Overview document, which approximates the requirements for a full Program Self-Evaluation Report. The team’s observations were, in large, consistent with the narrative in the I/O.

The campus—in a remote location to the east of the city of Az Zarqa, a major suburb of Amman—comprises buildings of a generally consistent vocabulary. The architecture building is one of the newest additions, and new construction includes a soon-to-open pharmacy program building, for which the concept design was done by one of HU’s female architecture students, as well as a very large engineering testing lab building. The campus is organized around two axes, the primary of which is the public axis defined by a steel-framed promenade covered for its extensive length with solar panels. This defines the central spine of what appears to be vibrant student life. The new architecture and engineering building is at the north end of this spine.

## **2. Review of Resources Committed to the Program**

### **a. Physical Resources**

The Architecture Department is located in a new building adjacent to the main Faculty of Engineering Building. The building was completed and occupied in 2018. The four-story building houses the Architectural Engineering Department. It comprises external and internal exhibitions, design studios, open studios, labs, offices, the library, meeting rooms, a NAAB display room, seminar rooms, and various support spaces. For our visit, the ground floor central space had been set up with extensive displays of student work.

Classrooms are equipped with a smart board, a projector, and a PC. There are six computer labs equipped with CAT 6 network tied to the campus via fiber optic cables. Each lab is equipped with a smart board, projector, and 20 PCs, each of which is loaded with a full range of software, including such platforms as AutoCAD, Revit, 3D Max, and Lumion. A printing room serves the department, faculty, and the university.

The building currently includes a fabrication lab with a laser cutter and other equipment. There are also an energy laboratory, a surveying laboratory, and a building materials laboratory. An acoustical lab and a lighting lab are under construction, and the team did observe that preparation work is under way in these spaces.

The visiting team's observations were generally in alignment with the narrative in the Institutional Overview. The significance of a fine new building for an architecture degree program, and its impact on administration, faculty, students, and staff cannot be overstated. There are also clear benefits to having contiguous, shared spaced with Engineering for classrooms and lecture facilities. The team did note that the fabrication lab is sparsely equipped, and there was little evidence of ongoing student work on models. It appears that students rely on superior facilities in the adjacent Engineering buildings.

The visiting team found that the facilities provide adequate support for the program for pursuit of International Certification.

#### **b. Financial Resources**

As the Institutional Overview states:

*The Department of Architecture Engineering is funded through annual budget allocations [sic] from the University Financial Affairs unit. These allocations are determined in response to budget requests made by the Faculty of Engineering. The Department of Architecture Engineering budget lines are divided between operations expenses, capital expenses and scientific research.*

In meetings at several levels of administration (president, vice president, program chair) it was made clear that, in general, the university, and the architecture program specifically, are on sound financial footing. In fact, as underscored by the president, Professor Kamal Bani-Hani, Hashemite University is essentially self-supporting, receiving no funds from the Jordanian state. In addition to funds from tuition, the university enjoys some supplemental funding through profits from its olive grove and has invested creatively in a sustainable design strategy that includes large arrays of solar collectors, de-salinization of water from deep underground (powered from the same collectors), and a trial installation of equipment that extracts potable water from the humidity in the air.

Enrollment in the program, currently at 300 students, is affected by outside forces, both within Jordan and beyond. Not all graduates are able to find employment within the country and must explore opportunities abroad, and local options also vary with fluctuations in the economy. Currently, it appears that these variations are, for the most part, predictable, and they also fall within the department's ability to plan for and accommodate any variations.

The team found that the financial resources of the Department of Architecture were adequate to support the program.

#### **c. Human Resources**

The faculty of the department currently numbers 14 full-time members, three of which are male and eleven of which are female. One is a full professor, two are associate professors, and four are assistant professors. All of the faculty members hold PhD degrees, and seven are lecturers who hold master's degrees.

The seven faculty who hold the rank of professor, associate professor, or assistant professor teach and contribute service to the department, the college, and the university. Every one of these faculty teaches design studio. Teaching loads are based on faculty rank. Full professors teach nine hours, associate and assistant professors twelve hours, and lecturers teach fifteen hours. Part-time faculty are hired on an as-needed basis and may offer a maximum of six credits.

The department has also recruited six additional lecturers for the 2019-2020 academic year. Lecturers may be responsible for CAD laboratory activities, including conducting the labs, lectures, and assisting students with work on their design projects. Sometimes lecturers teach introductory level courses according to their teaching and professional experience.

As a relatively new university, all colleges, as a means of growing the faculty to accommodate the expanding student population, have a program to provide support for outstanding graduates to continue their studies and obtain their doctorates. Candidates attend institutions in the United States, the United Kingdom, and other countries. Upon graduation, they are obligated to return and teach at HU for twice the number of years that they were sponsored and supported by HU. Currently the Department of Architectural Engineering has a total of six candidates at various universities.

The criteria and Procedures for Faculty Appointments, Faculty Promotion and Tenure are highlighted in the IO and guidelines are online. Faculty can participate in training courses annually offered in the college for professional development. Funding is available for travel and research grants. Each full-time faculty member is eligible and covered to present a paper at an international conference once a year. The salaries and benefits for faculty and staff are very competitive when compared to peer institutions. Under the leadership of the president, salaries were increased 70 % about five years ago, and salaries are increased annually.

Three additional architects serve as of lab supervisors: IT technician, model making technician, and library supervisor. A departmental secretary is on staff as well as student workers to assist students. Staff members receive funds for professional development.

A Career Guidance Office has been established to provide students with career advice and help with preparation of curriculum vitae and job interviews. The department, through the efforts of the students, has established a chapter of the American Institute of Architects Students (AIAS). The AIAS aims to empower voices, ideas, and actions for the future. It is the sole student voice in the collateral discussion and decision-making process.

The team found that the human resources at HU were adequate to support the program.

#### **d. Information Resources**

*The library has started serving students and researchers since the establishment of the Hashemite University in 1995, with a total area (12,000 m<sup>2</sup>). In addition to the main building; the university has established a specialized library for the medical facilities*

*located in the medical complex in the university. By the end of 2019, two new specialized libraries are expected to be opened for the Architectural department and the faculty of pharmaceutical science.*

*The library is centrally located in the university, which makes it a prime location surrounded by all faculties; it operates in an administration hierarchy that guarantees the high quality of services for both academic and administrative staff, along with researchers and students, besides serving the local community. Around 3000 – 5000 researchers or users use the library daily, with the aim of circulation, reading, studying and searching. The library opens for users, 5 days a week from Sunday to Thursday from 8 AM – 4 PM. The library also utilizes the Radio Frequency Identifications System (RFID) that provides an effective means of managing the library's holdings and facilitating easy access, circulation and return.*

The library holds around 183,000 printed books and 36,000 periodicals, university theses, and reports. In addition, it provides access to more than 300,000 online books. The IO reported that the number of architecture-related books was 1,676.

The library department has budget responsibility for the main library as well as the two new specialized libraries soon to be open in 2020. All requests for resources are approved by the library director. The library budget is more than adequate, and requests are rarely denied.

A substantial space in the new Department of Architectural Engineering Building is currently under construction to house the specialized library for the Architecture Department. It is scheduled to open in approximately three months. This will house all the current and new copies of architecture books and publications as well as up-to-date equipment for searching and checking out and in documents and resources.

The team found that the information resources at HU were adequate to support the program.

### **3. Commitment of the Institution to the Plan for Achieving International Certification**

The visiting team met with representatives of every level of Hashemite University affecting or engaged in the architecture program and found a broad commitment to the goal and importance of achieving International Certification. This included our meeting with President Bani-Hani and Vice President Shaher M. Rababeh. The president, who is completing his eighth year in that position, outlined a series of seven “Pillars/Obstacles” that he has addressed during his term. Two of these bear particular mention as setting a tone that should impact the learning in the architecture program: (1) energy, including efforts to reduce the university’s reliance on outside energy, through construction of a very sizable solar array; and (2) water, a de-salination plant for groundwater and a test facility of equipment to extract potable water from the atmosphere (both solar powered).

Our meeting with the dean of academic development and international outreach set the context for accreditation at HU, including local, regional, and international efforts. It is clear that international accreditation plays a key role in academic institutional ranking within Jordan, and,



currently, the architecture program is the only segment of the Faculty of Engineering that has not achieved this (the engineering degree programs having been accredited by ABET).

A similar commitment, and awareness of the process, extended through the administration and faculty with whom we met, having worked for several years on curriculum development in preparation for this and subsequent visits. At our all-student meeting, the students of the program indicated an awareness of the process and the importance that International Certification would hold for the architecture degree program.

In order to gauge community support, the team met at lunch with the Advisory Board and alumni. This group consisted of a half dozen alumni (graduates of the program over the past five years) and community supporters including practicing architects from Amman, a principal of an engineering firm responsible of construction of some key projects on the campus, and other professionals engaged with the architecture program. Although this group had apparently only met once before our visit, the attendees were all knowledgeable and articulate about the progress and promise of the architecture program and its value in the community and the Kingdom at large.

In summary, the team found a strong commitment to the Plan for Achieving International Certification at all levels of Hashemite University.

#### **4. Readiness of the Program to Complete Visit Two (Candidacy)**

Overall, this program is well positioned to proceed with the NAAB process for International Certification. As indicated above, the Institutional Overview submitted for the first visit is so comprehensive that the program has a solid foundation to prepare the Program Self-Evaluation required for visit two. The team observed other strong signs of readiness for visit two, including the sample team room, organized sequentially in accordance with the studio sequence and full of drawings, models, and other documentation.

The Institutional Overview includes a preliminary SPC matrix (page 98 of the Institutional Overview) that is well-organized and indicates where in the curriculum each criterion is satisfied (although this will require some editing, as the matrix currently indicates that some criteria are satisfied by as many as seven different classes or studios). And, finally, the team was given an impressive demonstration of the system the program's IT coordinator has developed to catalog completed student work, sorted by date, course, and student. Based on this work, Hashemite University should have the flexibility and capability to determine whether and to what degree student work might be presented digitally for visit two.

In preparation for visit two, the program is encouraged (1) to make progress on strengthening its collection of architecture-related information resources and opening the satellite library planned for the architecture building, and (2) to expand the range of equipment in the model workshop. As noted above, the model workshop appeared to have a single laser cutter for equipment and no evidence of ongoing model building in this space. Admittedly, there was absolutely no shortage of fine student models on display, and it was explained that students use the better facilities available in the engineering buildings.



Counterintuitively, the great mass of well-documented student work presents its own challenge. The program, in advance of a visit two, will need to sift and weed through this material in order to present clear (and not overwhelming) evidence of student work at high- and minimum-pass levels within a future team room. This would include the writing and documentation to complete a comprehensive Program Self-Evaluation that is in full conformance with the requirements of the *Procedures for NAAB International Certification*. The program also will need to focus considerable effort on collecting, identifying, and categorizing student work (both high- and minimum-pass) ahead of the visit. The program appears to have the structure in place to display work in the team room in a digital format. The amount of preparation and trial testing required should not be underestimated.

The “Timeline for Achieving International Certification,” on page 198 of the Institutional Overview, indicates a projected approval of the program to proceed with visit two in March/April of 2020, leading to submittal of a Program Self-Evaluation Report in June/July 2020, and visit two in October/November 2020.

Accordingly, the visiting team finds that the Department of Architectural engineering of the Hashemite University is prepared to move ahead with preparations for NAAB visit two.

## 5. Team Recommendation

The visiting team recommends to the directors of the National Architectural Accreditation Board that the Bachelor of Architecture (also referred to as the Bachelor of Architectural Engineering) degree of the Department of Architectural Engineering of the Faculty of Engineering at Hashemite University be approved to proceed immediately for a visit two of the NAAB International Certification program. Assuming that the program is prepared to submit the Program Self-Evaluation Report by no later than mid-July 2020, a visit could be planned no less than 120 days following, in November 2020. This would also seem to be an appropriate time period in terms of the stage of the work of students in studios in the fall semester.

## Acknowledgments

The visiting team would like to express its appreciation to the administration, faculty, staff, and students who met with us during our visit, and for the welcome and hospitality that we received. Our thanks extend in particular to Professor Kamal Bani-Hani, president of the Hashemite University, Professor Shaher M. Rababeh, vice president, and Dr. Ahmed N. Bdour, dean of the Faculty of Engineering. We would like to give particular thanks and recognition to the chair of the program, Dr. Ahmad Alhusban, for the time, care, and effort he devoted to our visit.

Respectfully submitted,



Cornelius Kin DuBois, FAIA, chair



Michael J. Buono, FAIA

